

Eddie Baza Calvo  
Governor



GENERAL SERVICES AGENCY  
Government of Guam  
148 Route 1 Marine Drive Corp  
Piti, Guam 96915

Ray Tenorio  
Lt. Governor

**INVITATION FOR BID NO. GSA-069-16**  
**PORTS AND SWITCHES**

**Amendment # 4**

August 3, 2016

1. Amend to extend Bid Opening

**FROM: August 8, 2016, 2:00 P.M.**

**TO: August 12, 2016, 2:00 P.M.**

2. Amend to replace Pages 34 thru 42 of 42, Revised 07/15/2016  
with the attached:
  - a. "Pages 34 thru 42 of 42, Revised 08/02/16"

All others remain unchanged.

A handwritten signature in black ink, appearing to read "Anita T. Cruz".

ANITA T. CRUZ

Acting Chief Procurement Officer

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	PRICE EXTENSION
4.1	Installation and Configuration As per the following specifications	1	JOB	\$ _____	\$ _____

SPECIFICATIONS:	BIDDING ON/REMARKS/COMPLY
Install new switches in the designated rack	_____
Move Ethernet patch cables from existing switches to new switches	_____
Configure the new switches in management stack	_____
Create two port link aggregation group between two stacks	_____
Create up to Five (5) VLANs	_____

**Bidding On:**

Manufacturer: \_\_\_\_\_

Make: \_\_\_\_\_

Model: \_\_\_\_\_

Place of Origin: \_\_\_\_\_

Date of Delivery: \_\_\_\_\_

The above specifications have been developed by the staff of the Office of the Attorney General and approved by Jacqueline Z. Cruz, Chief of Staff.

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	PRICE EXTENSION
5.1	24 PORT SWITCH – 8-1/10 GB SFP PORT BROCADE ICX 7250 24 Port As per the following specifications	1	EA	\$ _____	\$ _____

SPECIFICATIONS:	BIDDING ON/REMARKS/COMPLY
RJ-45 Ports: 10/100/1000	_____
10GB SFP Port Activated (2) w/ Module (2)	_____
1GB SFP Port Activated (8) w/ Module (2)	_____
10G SFP Single Fiber Module - LR (2)	_____
IG STP Single Fiber Module - LR (2)	_____
Poe+ Class 3 Port 24 port	_____
Fiber LC-LCPatch Cable 6 feet - (6)	_____
Direct Attached Copper Cable-Twinax (1)	_____
Advanced 1Pv4/v6 L3 routing {RIP, OSPF}	_____
Stacking bandwidth: 80GPS Full Duplex	_____
Stacking density: 12 Stacking Distance: 10km	_____
Console Management: USB / Serial w/ cable	_____
VLAN:4096	_____
Spanning Trees (STP): Max: 254	_____
MAC Addresses: Max 16,000	_____

**BIDDING ON/REMARKS/COMPLY**

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**SPECIFICATIONS:**

DHCP Relay  
DiffSery Support  
Honoring DSCP and 802. 1p  
MAC Address Mapping to Priority Queue  
Priority Queue Management using Weighted Round Robin (WRR),  
Strict Priority (SP) & a combination of WRR and SP  
IEEE & RFC Standards Compliance  
High Availability  
L3 VRRP protocol Redundancy  
Real Time state synchronization across the stack  
Hitless failover from master to standby stack controller  
Protected link group  
Hot insertion & removal of stacked units  
Five (5) year warranty -- parts & Labor

**BIDDING ON/REMARKS/COMPLY**

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**Note: Office of Technology has upgraded the network with Brocade switches. Specifications is similar to existing Brocade switches installed within the government.**

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	PRICE EXTENSION
6.1	24 PORT SWITCH - 4 1Gb SFP PORT BROCADE ICX7250 24 Port As per the following specifications	1	EA	\$ _____	\$ _____

**SPECIFICATIONS:**

RJ-45 Ports: 10/100/1000  
1GB SFP Port Activated (8) w/ Module (2)  
IG STP Single Fiber Module - LR (2)  
Poe+ Class 3 Port 24 port  
Fiber LC-LCPatch Cable 6 feet - (6)  
Direct Attached Copper Cable-Twinax (1)  
Advanced 1Pv4/v6 L3 routing {RIP, OSPF)  
Stacking bandwidth: 80GPS Full Duplex  
Stacking density: 12 Stacking Distance: 10km  
Console Management: USB / Serial w/ cable  
**VLAN:4096**  
Spanning Trees (STP): Max: 254  
MAC Addresses: Max 16,000  
Routes: Max 12,000 Trunking: 16  
QOS Priority Queues: 8  
Jumbo Frame Size: 9216 Bytes  
AC Power Supply 120-220V  
Switching Capacity: 176Gbps  
Forwarding Capacity 132Mpps  
Layer 2 Switching:  
802.1s Multiple Spanning Tree  
802.1x Authentication  
**Auto MDI/MDIX**  
BPDU Guard, Root Guard  
Dual-Mode VLANs  
MAC-based VLANs, Dynamic MAC based  
VLAN activation  
Dynamic VLAN Assignment  
Dynamic Voice VLAN Assignment  
Fast Port Span  
GARP VLAN Registration Protocol  
IGMP Snooping {v1/v2/v3)  
link Fault Signaling (LFS)  
IGMP Vian Registration Protocol  
IGMP Snooping (v1/v2/v3)

**BIDDING ON/REMARKS/COMPLY**

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**BIDDING ON/REMARKS/COMPLY**

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1 Pv4 & 1 Pv6 statics route

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## This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

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ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	PRICE EXTENSION
7.1	48 PORT SWITCH - 8 1/10Gb SFP port Brocade ICX7250 48 Port As per the following specifications	1	EA	\$ _____	\$ _____

**SPECIFICATIONS:**

RJ-45 Ports: 10/100/1000  
10GB SFP Port Activated (2) w/ Module (2)  
1GB SFP Port Activated (8) w/ Module (2}  
10G SFP Single Fiber Module - LR (2)  
1G STP Single Fiber Module - LR (2)  
Poe+ Class 3 Port 48 port  
Fiber LC-LCPatch Cable 6 feet - (6)  
Direct Attached Copper Cable-Twinax (1)  
Advanced 1Pv4/v6 L3 routing (RIP, OSPF}  
Stacking bandwidth: 80Gbps Full Duplex  
Stacking density: 12  
Stacking Distance: 10km  
Console Management: USB / Serial w/cable  
VLAN:4096  
Spanning Trees (STP}: Max: 254  
MAC Address-s: Max 16,000  
Routes: Max 12,000  
Trunking: 16  
QOS Priority Queues: 8  
Jumbo Frame Size: 9216  
Bytes AC Power Supply 120-220V  
Switching Capacity: 176Gbps  
Forwarding Capacity 132Mpps

**BIDDING ON/REMARKS/COMPLY**

### Layer 2 Switching:

- 802.1s Multiple Spanning Tree
- 802.1x Authentication
- Auto MDI/MDIX
- BPDU Guard, Root Guard
- Dual-Mode VLANs
- MAC-based VLANs, Dynamic MAC based VLAN activation
- Dynamic VLAN Assignment
- Dynamic Voice VLAN Assignment
- Fast Port Span
- GARP VLAN Registration Protocol
- IGMP Snooping (v1/v2/v3}
- Link Fault Signaling (LFS}
- IGMP Vian Registration Protocol
- IGMP Snooping (v1/v2/v3}
- IGMP Proxy for Static Groups
- IGMP v2/v3 Fast Leave IGMP Tracking
- Inter-Packed Gap (IPG} adjustment
- MAC Address Locking;
- Port Security MAC-Layer Filtering
- MAC Learning Disable
- MLD Snooping (v1/v21}
- Multi-device Authentication
- Per-VLAN Spanning Tree (PVST/PVST +/PVRST}
- Port-based Access Control Lists
- Mirroring - Port-based, ACL-based, MAC Filter-based, and VLAN-based
- Port Loop Detection
- Private VLAN
- Protected link Groups
- Protocol VLAN (802.1v}, Subnet VLAN
- Remote Fault Notification (**RFN**)
- Single-instance Spanning Tree
- Single-link LACP
- Trunk Groups
- Uni-Directional link Detection (UDLD)

1 Pv4 & 1 Pv6 statics route

### Port based Access Control list

### 1 Pv6 over 1 Pv4 Tunnels

PIM-SM, PIM-SSM, PIM-DM, PIM passive

RIPng

## Support Open Flow VI.0& VI.3 Feature

Operates seamlessly under the controller

### ACL Mapping and Marking of ToS/DSC

### ACL Mapping to Priority Queue

## Classifying and limiting Flows Based on TCP Flags

## DiffSery Support

## MAC Address Mapping to Priority Queue

Round Robin (WRR),

### Strict Priority (SP) & a combination of WRR and SP

## IEEE & RFC Standards Compliance

## High Availability

### 13 VRRP protocol Redundancy

## Real Time state synchronization across the stack

## Hitless failover from master to standby stack controller

Protected link group

### Hot insertion & removal of stacked units

Five (5) Year Warranty- Parts & Labor

**BIDDING ON/REMARKS/COMPLY**

1GB SFP Port Activated (8) w/ Module"(2)

IG STP Single Fiber Module - LR (2)

Poe+ Class 3 Port 48 port

Fiber LC-LCPatch Cable 6 feet - (6)

Direct Attached Copper Cable-Twinax (1)

Advanced IPv4/v6 L3 routing (RIP, OSPF)

Stacking bandwidth: 80Gbps Full Duplex

Stacking density: 12

Stacking Distance: 10km

Console Management: USB / Serial w/cable

VLAN:4096

Spanning Trees (STP): Max: 254

MAC Address-s: Max 16,000

Routes: Max 12,000

Trunking: 16

QOS Priority Queues: 8



Jumbo Frame Size: 9216 Bytes  
AC Power Supply 120-220V  
Switching Capacity: 176Gbps  
Forwarding Capacity 132Mpps

- 802.1s Multiple Spanning Tree
- 802.1x Authentication
- Auto MDI/MDIX
- BPDU Guard, Root Guard
- Dual-Mode VLANs
- MAC-based VLANs, Dynamic MAC based VLAN activation
- Dynamic VLAN Assignment
- Dynamic Voice VLAN Assignment
- Fast Port Span
- GARP VLAN Registration Protocol
- IGMP Snooping (v1/v2/v3}
- Link Fault Signaling (LFS}
- IGMP Vlan Registration Protocol
- IGMP Snooping (v1/v2/v3}
- IGMP Proxy for Static Groups
- IGMP v2/v3 Fast Leave IGMP Tracking
- Inter-Packed Gap (IPG} adjustment
- MAC Address Locking; Port Security
- MAC-Layer Filtering
- MAC Learning Disable
- MLD Snooping (v1/v21
- Multi-device Authentication
- Per-VLAN Spanning Tree (PVST/PVST +/PVRST}
- Port-based Access Control Lists
- Mirroring - Port-based, ACL-based, MAC Filter-based, and VLAN-based
- Port Loop Detection
- Private VLAN
- Protected link Groups
- Protocol VLAN (802.14 Subnet VLAN
- Remote Fault Notification (**RFN**}
- Single-instance Spanning Tree
- Single-link LACP
- Trunk Groups
- Uni-Directional link Detection (UDLD)

- 1 Pv4 & 1 Pv6 statics route
- EMCP
- Port based Access Control list
- VRRP-E
- 1 Pv6 over 1 Pv4 Tunnels
- OSPF v3
- PIM-SM, PIM-SSM, PIM-DM, PIM passive
- (1 Pv4 multicast routing functionality)
- RIPng

Support Open Row V.I.O& V.I.3 Feature  
OpenFlow support w/ true hybrid post mode  
Operates seamlessly under the controller

- ACL Mapping and Marking of ToS/DSC
- ACL Mapping and Marking of 802.1p
- ACL Mapping to Priority Queue
- ACL Mapping tQToS/DSCP
- Classifying and limiting Flows Based on TCP Flags
- DHCP Relay
- DiffServ Support
- Honoring DSCP and 802.1p
- MAC Address Mapping to Priority Queue

Blank lined paper for writing.



**SPECIFICATIONS:**

Priority Queue Management using Weighted Round Robin (WRR),  
Strict Priority (SP) & a combination of WRR and SP  
IEEE & RFC Standards Compliance High Availability  
13 VRRP protocol Redundancy  
Real Time state synchronization across the stack  
Hitless failover from master to standby stack controller  
Protected link group  
Hot insertion & removal of stacked units  
Five (5) Year Warranty- Parts & Labor

**BIDDING ON/REMARKS/COMPLY**


**Note: Office of Technology has upgraded the network with Brocade switches. Specifications is similar to existing Brocade switches installed within the government.**

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	PRICE EXTENSION
9.1	<b>BROCADE VDX6740-24-1/10- GbE SFP</b> As per the following specifications	1	EA	\$ _____	\$ _____

**SPECIFICATIONS:**

1/10 Gbe SFP+ ports: 24  
Ports on Demand (Pod) increments: 16,24  
Activate 24 Port: 10Gb  
Max Spanning Tree Instances: 32:  
Max Port Profiles (AMPP): 256  
Max Layer 2 Multicast Group: 2000  
VLAN:4096  
MAC Addresses: Max 32,000  
Max Per-Port Priority pause Level: 8  
Max LAG Groups in a VCS fabric: 512  
Max Members in Standard LAG: 16  
Max MAC Addresses in a CS fabric: 30000  
Max Switch in a VCS fabrics: 24  
Max switches in a VCS fabrics: 24  
Max ECMP paths in a VCS fabrics: 8  
Max Truck Members for VCS fabric ports: 8  
Max switches across which a vLAG can span: 4  
Max Members in a VLAG: 16  
Max Jumbo Frame Size: 9208 bytes  
Queues per port: 8  
DCB Priority Flow Control (PFC) classes

**BIDDING ON/REMARKS/COMPLY**


**LAYER2**

Max Learning and Aging  
Static MAC Configuration  
Link Aggregation Control Protocol (LACP}  
802.3AD.802.1ax  
VLAN  
VLAN Encapsulation 802.IQ  
Rapid Spanning Tree Protocol (RSTP} 802.ID  
Multiple Spanning Tree Protocol (MSTP} 802.IS  
Per-Vian Spamming Tree (PVST=/PVRST+)  
StpPortFast&PortFast BDPU Guard  
Layer 2 Access Control Lists (ACL}  
Address Resolution Protocol (ARP) RFC 826  
IGMP vl/v2 Snooping  
Pause Frames 802.3x


**VCS Fabric Features:**

Automatic Fabric Formation  
Distributed Fabric Services  
Transport LAN Services


**VLAN**

Switching Beaconing  
Distributed Configuration Management  
STP Root Guard  
Layer 2 Access Control List (ACLs)  
Address Resolution Protocol (ARP) RFC 826


IGMP VI/V2 Snooping	
Distributed Configuration Management	
STP Root Guard	
Layer 2 Access Control List (ACLs)	
Address Resolution Protocol (ARP) RFC 826	
IGMP VI/V2 Snooping	

<b>DCB Features:</b>	
Priority-based Flow Control (PFC) 802.IQbb	
Enhanced Transmission Services (ETS)	
Data Center Bridging Exchange (DCBX)	
DCBX Application Type-Lengh-Valve (TLV) for FCoE and ISCSI	

<b>FCOE Features</b>	
MultiHop Fiber Channel over Ethernet (FCoE)	
FC-BB5 ComliantFibre Channel Forwarder (FCF)	
Native FCoE Forwarding	
End-of-end FCoE (Initiator to target)	
FCoE Initialization Protocol (FIP)vl support for FCoE devices	
login and initialization	

<b>Quality of Service (QOS)</b>	
Eight priority level for QOS	
Class of Services (CoS) 802.1p	
Per-port QoS configuration	
Scheduling Strict Priority (SP), Shaped Deficit	
Weighted Round-Robin (SDWRR)	
Power Supples: (2) Internal - Redundant	
120/220 Voltage - North America	
Power Cord connects to PON Unit	
Five (5) Year Warranty- Parts & Labor	

ITEM NO.	DESCRIPTION	QTY	UOM	UNIT PRICE	PRICE EXTENSION
10.1	<b>BROCADE VDX 6720 1/10Gb SFP+ Module Refers to Ports on Demand (PoD), 8 1/10GbE SFP ports required.</b>	1	EA	\$_____	\$_____
11.1	<b>BROCADE VDX 6720 1Gb SFP+ Module (1GbE SFP+ optics) with LX required.</b>	1	EA	\$_____	\$_____
12.1	<b>BROCADE VDX 6720 10Gb SFP+ Module (10GbE SFP+ optics) SR</b>	1	EA	\$_____	\$_____
13.1	<b>BROCADE VDX 6720 1GB TX</b>	1	EA	\$_____	\$_____
14.1	<b>BROCADE VDX 6720 10G TWINAX</b>	1	EA	\$_____	\$_____
15.1	<b>BROCADE VDX 6720 10Gb SFP+ Module (10GbE SFP+ optics) LR</b>	1	EA	\$_____	\$_____
16.1	<b>LC-LC SINGLE MODE FIBER PATCH CABLE 30 FT.</b>	1	EA	\$_____	\$_____
17.1	<b>BROCADE ICX7250 2x10G-LIC-POD</b>	1	EA	\$_____	\$_____
18.1	<b>BROCADE ICX7250 8x10G-LIC-POD</b>	1	EA	\$_____	\$_____

**Note: Office of Technology has upgraded the network with Brocade switches. Specifications is similar to existing Brocade switches installed within the government.**

**The above specifications have been developed by the staff of the Office of Technology, Department of Administration and approved by Christine Baletto, Director of Department of Administration.**